

REMARKS/ARGUMENTS

Applicants elect to prosecute the claims of Group 1 (claims 1, 6, 31 (in part), and 32 (in part) in the present application. Applicants further elect with traverse to prosecute claims directed to SEQ ID NO: 4. In the Office Action, the Examiner states that restriction between these sequences is proper because they lack the same or corresponding special technical features, as required by PCT Rule 13.2. In particular, the Examiner states that the sequences disclosed and claimed in the present application do not share a common structure or function that distinguished them from the prior art. In fact, as explained below, SEQ ID NOs: 4 and 6 do share such a common technical feature.


As shown in Figure 2(C) of the present application, SEQ ID NOs: 4 and 6 are splice variants of MICAL2-PV. SEQ ID NO: 4 is the “long form” and SEQ ID NO: 6 is the “short form.” These two proteins have unique C-terminal structures as compared with MICAL2 that can be seen in an alignment of the SEQ ID NOs: 4, 6, and MICAL2, shown in the attached appendix. As can be seen the N-terminal sequence from the 1st to the 739th residue is common to the three proteins. However, the same C-terminal sequence is present in SEQ ID NO: 4 (residues 889-976) and SEQ ID NO: 6 (residues 865-955), but is *not* present in MICAL2. Thus, SEQ ID NOs: 4 and 6 share a special technical feature that distinguishes them over the prior art.

CONCLUSION

In view of the foregoing, Applicants believe that unity between SEQ ID NOs: 4 and 6 should be acknowledged in the present application. Applicants respectfully request withdrawal of the restriction between these two sequences.

If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at 415-576-0200.

Respectfully submitted,



Kevin Bastian
Reg. No. 34,774

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 415-576-0200
Fax: 415-576-0300
Attachments
KLB:klb
61256477 v1

Appendix

Sequence 1: SEQ ID NO: 4 976 aa
Sequence 2: SEQ ID NO: 6 955 aa
Sequence 3: known MICAL2 1124 aa

SEQ ID NO: 4	MGENEDEKQAQAGQVFENFVQASTCKGTLQAFNILTRHLDLDPLDHRNFYSKLSKSVTTW	60
SEQ ID NO: 6	MGENEDEKQAQAGQVFENFVQASTCKGTLQAFNILTRHLDLDPLDHRNFYSKLSKSVTTW	60
known MICAL2	MGENEDEKQAQAGQVFENFVQASTCKGTLQAFNILTRHLDLDPLDHRNFYSKLSKSVTTW	60

SEQ ID NO: 4	KAKALWYKLDKRGSHKEYKRGKSCTNTKCLIVGGGPCGLRTAIELAYLGAKVVVVEKRDS	120
SEQ ID NO: 6	KAKALWYKLDKRGSHKEYKRGKSCTNTKCLIVGGGPCGLRTAIELAYLGAKVVVVEKRDS	120
known MICAL2	KAKALWYKLDKRGSHKEYKRGKSCTNTKCLIVGGGPCGLRTAIELAYLGAKVVVVEKRDS	120

SEQ ID NO: 4	FSRNNVLHLWPFTIHDLRGLGAKKFYGFKFCAGSIDHISIRQLQLILFKVALMLGVEIHVN	180
SEQ ID NO: 6	FSRNNVLHLWPFTIHDLRGLGAKKFYGFKFCAGSIDHISIRQLQLILFKVALMLGVEIHVN	180
known MICAL2	FSRNNVLHLWPFTIHDLRGLGAKKFYGFKFCAGSIDHISIRQLQLILFKVALMLGVEIHVN	180

SEQ ID NO: 4	VEFVKVLEPPEDQENQKIGWRAEFLPTDHSLSSEFEFDVIGADGRRNTLEGFRRKEFRGK	240
SEQ ID NO: 6	VEFVKVLEPPEDQENQKIGWRAEFLPTDHSLSSEFEFDVIGADGRRNTLEGFRRKEFRGK	240
known MICAL2	VEFVKVLEPPEDQENQKIGWRAEFLPTDHSLSSEFEFDVIGADGRRNTLEGFRRKEFRGK	240

SEQ ID NO: 4	LAIAITANFINRNSTAEAKVEEISGVAFIFNQKFFQDLKEETGIDLENI VYYKDCTHYFV	300
SEQ ID NO: 6	LAIAITANFINRNSTAEAKVEEISGVAFIFNQKFFQDLKEETGIDLENI VYYKDCTHYFV	300
known MICAL2	LAIAITANFINRNSTAEAKVEEISGVAFIFNQKFFQDLKEETGIDLENI VYYKDCTHYFV	300

SEQ ID NO: 4	MTAKKQSLLDKGVIINDYIDTEMLLCAENVNQDNLLSYAREAADFATNYQLPSLDFAMNH	360
SEQ ID NO: 6	MTAKKQSLLDKGVIINDYIDTEMLLCAENVNQDNLLSYAREAADFATNYQLPSLDFAMNH	360
known MICAL2	MTAKKQSLLDKGVIINDYIDTEMLLCAENVNQDNLLSYAREAADFATNYQLPSLDFAMNH	360

SEQ ID NO: 4	YGQPDVAMFDFTCMYASENAALVRERQAHQLLVALVGDSLLEPFWPMGTGCARGFLAAFD	420
SEQ ID NO: 6	YGQPDVAMFDFTCMYASENAALVRERQAHQLLVALVGDSLLEPFWPMGTGCARGFLAAFD	420
known MICAL2	YGQPDVAMFDFTCMYASENAALVRERQAHQLLVALVGDSLLEPFWPMGTGCARGFLAAFD	420

SEQ ID NO: 4	TAWMVKSWNQGTTPPELLAERESLYRLLPQTTPENINKNFEQYTLDPGTRYPNLNSHCVR	480
SEQ ID NO: 6	TAWMVKSWNQGTTPPELLAERESLYRLLPQTTPENINKNFEQYTLDPGTRYPNLNSHCVR	480
known MICAL2	TAWMVKSWNQGTTPPELLAERESLYRLLPQTTPENINKNFEQYTLDPGTRYPNLNSHCVR	480

SEQ ID NO: 4	PHQVKHLYITKELEHYPLERLGSVRRSVNLSRKESDIRPSKLLTWCQQQTEGYQHVNVTD	540
SEQ ID NO: 6	PHQVKHLYITKELEHYPLERLGSVRRSVNLSRKESDIRPSKLLTWCQQQTEGYQHVNVTD	540
known MICAL2	PHQVKHLYITKELEHYPLERLGSVRRSVNLSRKESDIRPSKLLTWCQQQTEGYQHVNVTD	540

SEQ ID NO: 4	LTTSWRSGALCAI IHRFRPEL I NFD SLNEDDAVENNQLAFDVAEREF G I PPVTTGKEMA	600
SEQ ID NO: 6	LTTSWRSGALCAI IHRFRPEL I NFD SLNEDDAVENNQLAFDVAEREF G I PPVTTGKEMA	600
known MICAL2	LTTSWRSGALCAI IHRFRPEL I NFD SLNEDDAVENNQLAFDVAEREF G I PPVTTGKEMA *****	600
SEQ ID NO: 4	SAGEPDKLSMV MYLSKFYELFRGTPLRPVDSWRKNYGENADLSLAKSSI SN NYLNLT FPR	660
SEQ ID NO: 6	SAGEPDKLSMV MYLSKFYELFRGTPLRPVDSWRKNYGENADLSLAKSSI SN NYLNLT FPR	660
known MICAL2	SAGEPDKLSMV MYLSKFYELFRGTPLRPVDSWRKNYGENADLSLAKSSI SN NYLNLT FPR *****	660
SEQ ID NO: 4	KRTPRVDGQT GENDMNKRRRKGF TNLDEPSNFSSRSLG SNQECGSSKEGGNQNKVKS MAN	720
SEQ ID NO: 6	KRTPRVDGQT GENDMNKRRRKGF TNLDEPSNFSSRSLG SNQECGSSKEGGNQNKVKS MAN	720
known MICAL2	KRTPRVDGQT GENDMNKRRRKGF TNLDEPSNFSSRSLG SNQECGSSKEGGNQNKVKS MAN *****	720
SEQ ID NO: 4	QLLAKFEESTRNPSLMKQE-----	739
SEQ ID NO: 6	QLLAKFEESTRNPSLMKQE-----	739
known MICAL2	QLLAKFEESTRNPSLMKQERRVSG I GKPVL CSSSGPPVHSCCPKEEATPSPSPPLKRQF *****	780
SEQ ID NO: 4	-----	739
SEQ ID NO: 6	-----	739
known MICAL2	PSVVVTGHVLR ELKQVSAGSECLSRPWRARAKSDLQLGGTENFATLPSTRPRAQALSGVL	840
SEQ ID NO: 4	-----	739
SEQ ID NO: 6	-----	739
known MICAL2	WRLQQVEEK I LQKRAQNLANREFHTKNI KEKAAHLASMF GHGDFPQNKLLSKGLSHTHP	900
SEQ ID NO: 4	-----KKSPSGFHFHPSHLRTVHPQE-----	760
SEQ ID NO: 6	-----	739
known MICAL2	SPPSRLPSPDPAASSSPSTVDSASPARKEKKSPSGFHFHPSHLRTVHPQLTVGKVSSGIG	960
SEQ ID NO: 4	-----SMRKSFPLNLGGSDTCYFCKKR VYVMERLSAEGH	794
SEQ ID NO: 6	-----SMRKSFPLNLGGSDTCYFCKKR VYVMERLSAEGH	773
known MICAL2	AAAEVLVNL YMNDHRPKAQTSPDLESMRKSFPLNLGGSDTCYFCKKR VYVMERLSAEGH *****	1020
SEQ ID NO: 4	FFHRECFRCS I CATT LRLAAYTFDCDEGKFYCKPHF I HCKTNSKQRKRAELKQOREEEA	854
SEQ ID NO: 6	FFHRECFRCS I CATT LRLAAYTFDCDEGKFYCKPHF I HCKTNSKQRKRAELKQOREEEA	833
known MICAL2	FFHRECFRCS I CATT LRLAAYTFDCDEGKFYCKPHF I HCKTNSKQRKRAELKQOREEEA *****	1080

886 (NO:4) / 865 (NO:6)

SEQ ID NO: 4	TWQEQEAPRRDTPTESSCAVAAIGTLEGSPPGISTSFVRKVLGWPLRLPRDLCNWMQGLL	914
SEQ ID NO: 6	TWQEQEAPRRDTPTESSCAVAAIGTLEGSPPGISTSFVRKVLGWPLRLPRDLCNWMQGLL	893
known MICAL2	TWQEQEAPRRDTPTESSCAVAAIGTLEGSP-----	1111

SEQ ID NO: 4	QAAGLHIRDNAYNYCYMYELLSLGLPLLWAFSEVLAAMYRESEGSLETCNWWLRCFPVK	974
SEQ ID NO: 6	QAAGLHIRDNAYNYCYMYELLSLGLPLLWAFSEVLAAMYRESEGSLETCNWWLRCFPVK	953
known MICAL2	-----VHFSLPVLHPLL	1124
	: :.*:* .:	
SEQ ID NO: 4	LR	976
SEQ ID NO: 6	LR	955